Release notes for ENDF/B Development n-080_Hg_198 evaluation

April 26, 2017

- **checkr** Warnings:

  1. A previous error halted parsing of the current section
     MAT=8031, MF= 1, MT=451 (1): Parsing stopped

     ```
     ERROR(S) FOUND IN MAT=8031, MF= 1, MT=451
         SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER     206 TO     336
     ```

- **checkr** Errors:

  1. A variable is outside the allowed ENDF range
     MAT=8031, MF= 1, MT=451 (0): Variable range

     ```
     ERROR(S) FOUND IN MAT=8031, MF= 1, MT=451
         MOD =    1 OUT OF RANGE    0 -    0          RECORD NUMBER    206
     ```

  2. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF= 2, MT=151 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=8031, MF= 2, MT=151
         SECTION  2/151 NOT IN DIRECTORY              RECORD NUMBER    338
     ```

  3. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF= 3, MT= 1 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=8031, MF= 3, MT=  1
         SECTION  3/  1 NOT IN DIRECTORY              RECORD NUMBER    350
     ```

  4. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF= 3, MT= 2 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=8031, MF= 3, MT=  2
         SECTION  3/  2 NOT IN DIRECTORY              RECORD NUMBER    441
     ```

  5. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF= 3, MT= 4 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=8031, MF= 3, MT=  4
         SECTION  3/  4 NOT IN DIRECTORY              RECORD NUMBER    531
     ```

  6. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF= 3, MT= 5 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=8031, MF= 3, MT=  5
         SECTION  3/  5 NOT IN DIRECTORY              RECORD NUMBER    560
     ```

  7. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF= 3, MT= 16 (0): Directory (b)

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```
      ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 16
         SECTION  3/ 16 NOT IN DIRECTORY                    RECORD NUMBER     611
```

8. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=8031, MF= 3, MT= 17 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 17
         SECTION  3/ 17 NOT IN DIRECTORY                    RECORD NUMBER     618
```

9. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=8031, MF= 3, MT= 22 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 22
         SECTION  3/ 22 NOT IN DIRECTORY                    RECORD NUMBER     624
```

10. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 28 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 28
         SECTION  3/ 28 NOT IN DIRECTORY                    RECORD NUMBER     632
```

11. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 51 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 51
         SECTION  3/ 51 NOT IN DIRECTORY                    RECORD NUMBER     640
```

12. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 52 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 52
         SECTION  3/ 52 NOT IN DIRECTORY                    RECORD NUMBER     654
```

13. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 53 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 53
         SECTION  3/ 53 NOT IN DIRECTORY                    RECORD NUMBER     668
```

14. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 54 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 54
         SECTION  3/ 54 NOT IN DIRECTORY                    RECORD NUMBER     681
```

15. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 55 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 55
           SECTION  3/ 55 NOT IN DIRECTORY                RECORD NUMBER     693
```

16. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 56 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 56
           SECTION  3/ 56 NOT IN DIRECTORY                RECORD NUMBER     703
```

17. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 57 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 57
           SECTION  3/ 57 NOT IN DIRECTORY                RECORD NUMBER     713
```

18. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 58 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 58
           SECTION  3/ 58 NOT IN DIRECTORY                RECORD NUMBER     723
```

19. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 59 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 59
           SECTION  3/ 59 NOT IN DIRECTORY                RECORD NUMBER     735
```

20. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 60 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 60
           SECTION  3/ 60 NOT IN DIRECTORY                RECORD NUMBER     748
```

21. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 61 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 61
           SECTION  3/ 61 NOT IN DIRECTORY                RECORD NUMBER     758
```

22. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 62 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 62
           SECTION  3/ 62 NOT IN DIRECTORY                RECORD NUMBER     768
```

23. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 63 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 63
        SECTION  3/ 63 NOT IN DIRECTORY              RECORD NUMBER      778
```

24. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 64 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 64
        SECTION  3/ 64 NOT IN DIRECTORY              RECORD NUMBER      789
```

25. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 65 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 65
        SECTION  3/ 65 NOT IN DIRECTORY              RECORD NUMBER      799
```

26. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 66 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 66
        SECTION  3/ 66 NOT IN DIRECTORY              RECORD NUMBER      809
```

27. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 67 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 67
        SECTION  3/ 67 NOT IN DIRECTORY              RECORD NUMBER      819
```

28. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 68 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 68
        SECTION  3/ 68 NOT IN DIRECTORY              RECORD NUMBER      829
```

29. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 69 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 69
        SECTION  3/ 69 NOT IN DIRECTORY              RECORD NUMBER      839
```

30. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT= 91 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=8031, MF= 3, MT= 91
        SECTION  3/ 91 NOT IN DIRECTORY              RECORD NUMBER      848
```

31. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT=102 (0): Directory (b)

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```
        ERROR(S) FOUND IN MAT=8031, MF= 3, MT=102
           SECTION  3/102 NOT IN DIRECTORY                 RECORD NUMBER     858
```

32. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT=103 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 3, MT=103
           SECTION  3/103 NOT IN DIRECTORY                 RECORD NUMBER     872
```

33. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT=104 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 3, MT=104
           SECTION  3/104 NOT IN DIRECTORY                 RECORD NUMBER     882
```

34. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 3, MT=107 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 3, MT=107
           SECTION  3/107 NOT IN DIRECTORY                 RECORD NUMBER     890
```

35. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 2 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 4, MT=  2
           SECTION  4/  2 NOT IN DIRECTORY                 RECORD NUMBER     905
```

36. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 16 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 16
           SECTION  4/ 16 NOT IN DIRECTORY                 RECORD NUMBER    5319
```

37. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 17 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 17
           SECTION  4/ 17 NOT IN DIRECTORY                 RECORD NUMBER    5322
```

38. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 22 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 22
           SECTION  4/ 22 NOT IN DIRECTORY                 RECORD NUMBER    5325
```

39. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 28 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 28
         SECTION  4/ 28 NOT IN DIRECTORY                   RECORD NUMBER    5328
```

40. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 51 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 51
         SECTION  4/ 51 NOT IN DIRECTORY                   RECORD NUMBER    5331
```

41. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 52 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 52
         SECTION  4/ 52 NOT IN DIRECTORY                   RECORD NUMBER    5445
```

42. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 53 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 53
         SECTION  4/ 53 NOT IN DIRECTORY                   RECORD NUMBER    5537
```

43. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 54 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 54
         SECTION  4/ 54 NOT IN DIRECTORY                   RECORD NUMBER    5629
```

44. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 55 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 55
         SECTION  4/ 55 NOT IN DIRECTORY                   RECORD NUMBER    5713
```

45. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 56 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 56
         SECTION  4/ 56 NOT IN DIRECTORY                   RECORD NUMBER    5740
```

46. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 57 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 57
         SECTION  4/ 57 NOT IN DIRECTORY                   RECORD NUMBER    5767
```

47. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 58 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 58
           SECTION  4/ 58 NOT IN DIRECTORY                RECORD NUMBER    5794
```

48. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 59 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 59
           SECTION  4/ 59 NOT IN DIRECTORY                RECORD NUMBER    5876
```

49. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 60 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 60
           SECTION  4/ 60 NOT IN DIRECTORY                RECORD NUMBER    5955
```

50. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 61 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 61
           SECTION  4/ 61 NOT IN DIRECTORY                RECORD NUMBER    5982
```

51. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 62 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 62
           SECTION  4/ 62 NOT IN DIRECTORY                RECORD NUMBER    6009
```

52. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 63 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 63
           SECTION  4/ 63 NOT IN DIRECTORY                RECORD NUMBER    6036
```

53. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 64 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 64
           SECTION  4/ 64 NOT IN DIRECTORY                RECORD NUMBER    6118
```

54. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 65 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 65
           SECTION  4/ 65 NOT IN DIRECTORY                RECORD NUMBER    6145
```

55. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 66 (0): Directory (b)

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```
        ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 66
           SECTION  4/ 66 NOT IN DIRECTORY                RECORD NUMBER    6172
```

56. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 67 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 67
           SECTION  4/ 67 NOT IN DIRECTORY                RECORD NUMBER    6199
```

57. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 68 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 68
           SECTION  4/ 68 NOT IN DIRECTORY                RECORD NUMBER    6226
```

58. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 69 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 69
           SECTION  4/ 69 NOT IN DIRECTORY                RECORD NUMBER    6253
```

59. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 4, MT= 91 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 4, MT= 91
           SECTION  4/ 91 NOT IN DIRECTORY                RECORD NUMBER    6281
```

60. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 5, MT= 16 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 5, MT= 16
           SECTION  5/ 16 NOT IN DIRECTORY                RECORD NUMBER    6309
```

61. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 5, MT= 17 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 5, MT= 17
           SECTION  5/ 17 NOT IN DIRECTORY                RECORD NUMBER    6360
```

62. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 5, MT= 22 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF= 5, MT= 22
           SECTION  5/ 22 NOT IN DIRECTORY                RECORD NUMBER    6387
```

63. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 5, MT= 28 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF= 5, MT= 28
         SECTION  5/ 28 NOT IN DIRECTORY                 RECORD NUMBER    6460
```

64. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 5, MT= 91 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF= 5, MT= 91
         SECTION  5/ 91 NOT IN DIRECTORY                 RECORD NUMBER    6513
```

65. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF= 6, MT= 5 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF= 6, MT=  5
         SECTION  6/  5 NOT IN DIRECTORY                 RECORD NUMBER    6609
```

66. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF=12, MT= 16 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF=12, MT= 16
         SECTION 12/ 16 NOT IN DIRECTORY                 RECORD NUMBER   18644
```

67. Missing a gamma spectrum for continuum of gammas
    MAT=8031, MF=12, MT= 16 (1): No gamma spectrum

```
      ERROR(S) FOUND IN MAT=8031, MF=12, MT= 16
         CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

68. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF=12, MT= 17 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF=12, MT= 17
         SECTION 12/ 17 NOT IN DIRECTORY                 RECORD NUMBER   18652
```

69. Missing a gamma spectrum for continuum of gammas
    MAT=8031, MF=12, MT= 17 (1): No gamma spectrum

```
      ERROR(S) FOUND IN MAT=8031, MF=12, MT= 17
         CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

70. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=8031, MF=12, MT= 22 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF=12, MT= 22
         SECTION 12/ 22 NOT IN DIRECTORY                 RECORD NUMBER   18659
```

71. Missing a gamma spectrum for continuum of gammas
    MAT=8031, MF=12, MT= 22 (1): No gamma spectrum

```
      ERROR(S) FOUND IN MAT=8031, MF=12, MT= 22
         CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

72. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=8031, MF=12, MT= 28 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 28
       SECTION 12/ 28 NOT IN DIRECTORY                RECORD NUMBER   18667
```

73. Missing a gamma spectrum for continuum of gammas
MAT=8031, MF=12, MT= 28 (1): No gamma spectrum

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 28
       CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

74. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=8031, MF=12, MT= 51 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 51
       SECTION 12/ 51 NOT IN DIRECTORY                RECORD NUMBER   18675
```

75. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=8031, MF=12, MT= 52 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 52
       SECTION 12/ 52 NOT IN DIRECTORY                RECORD NUMBER   18679
```

76. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=8031, MF=12, MT= 53 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 53
       SECTION 12/ 53 NOT IN DIRECTORY                RECORD NUMBER   18683
```

77. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=8031, MF=12, MT= 54 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 54
       SECTION 12/ 54 NOT IN DIRECTORY                RECORD NUMBER   18687
```

78. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=8031, MF=12, MT= 55 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 55
       SECTION 12/ 55 NOT IN DIRECTORY                RECORD NUMBER   18691
```

79. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=8031, MF=12, MT= 56 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 56
       SECTION 12/ 56 NOT IN DIRECTORY                RECORD NUMBER   18696
```

80. Missing a section in directory so your directory is messed up. This error will break everything else
$MAT=8031$, $MF=12$, $MT= 57$ (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 57
       SECTION 12/ 57 NOT IN DIRECTORY                RECORD NUMBER   18700
```

81. Missing a section in directory so your directory is messed up. This error will break everything else
$MAT=8031$, $MF=12$, $MT= 58$ (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 58
       SECTION 12/ 58 NOT IN DIRECTORY                RECORD NUMBER   18705
```

82. Missing a section in directory so your directory is messed up. This error will break everything else
$MAT=8031$, $MF=12$, $MT= 59$ (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 59
       SECTION 12/ 59 NOT IN DIRECTORY                RECORD NUMBER   18709
```

83. Missing a section in directory so your directory is messed up. This error will break everything else
$MAT=8031$, $MF=12$, $MT= 60$ (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 60
       SECTION 12/ 60 NOT IN DIRECTORY                RECORD NUMBER   18713
```

84. Missing a section in directory so your directory is messed up. This error will break everything else
$MAT=8031$, $MF=12$, $MT= 61$ (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 61
       SECTION 12/ 61 NOT IN DIRECTORY                RECORD NUMBER   18717
```

85. Missing a section in directory so your directory is messed up. This error will break everything else
$MAT=8031$, $MF=12$, $MT= 62$ (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 62
       SECTION 12/ 62 NOT IN DIRECTORY                RECORD NUMBER   18721
```

86. Missing a section in directory so your directory is messed up. This error will break everything else
$MAT=8031$, $MF=12$, $MT= 63$ (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 63
       SECTION 12/ 63 NOT IN DIRECTORY                RECORD NUMBER   18726
```

87. Missing a section in directory so your directory is messed up. This error will break everything else
$MAT=8031$, $MF=12$, $MT= 64$ (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 64
       SECTION 12/ 64 NOT IN DIRECTORY                RECORD NUMBER   18730
```

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88. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=8031, MF=12, MT= 65 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 65
       SECTION 12/ 65 NOT IN DIRECTORY                RECORD NUMBER   18735
```

89. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=8031, MF=12, MT= 66 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 66
       SECTION 12/ 66 NOT IN DIRECTORY                RECORD NUMBER   18740
```

90. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=8031, MF=12, MT= 67 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 67
       SECTION 12/ 67 NOT IN DIRECTORY                RECORD NUMBER   18745
```

91. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=8031, MF=12, MT= 68 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 68
       SECTION 12/ 68 NOT IN DIRECTORY                RECORD NUMBER   18749
```

92. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=8031, MF=12, MT= 69 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 69
       SECTION 12/ 69 NOT IN DIRECTORY                RECORD NUMBER   18753
```

93. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=8031, MF=12, MT= 91 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 91
       SECTION 12/ 91 NOT IN DIRECTORY                RECORD NUMBER   18757
```

94. Missing a gamma spectrum for continuum of gammas
MAT=8031, MF=12, MT= 91 (1): No gamma spectrum

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT= 91
       CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

95. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=8031, MF=12, MT=102 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=8031, MF=12, MT=102
       SECTION 12/102 NOT IN DIRECTORY                RECORD NUMBER   18767
```

12

96. Missing a gamma spectrum for continuum of gammas
MAT=8031, MF=12, MT=102 (1): No gamma spectrum

```
     ERROR(S) FOUND IN MAT=8031, MF=12, MT=102
        CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

97. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=8031, MF=12, MT=103 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=8031, MF=12, MT=103
        SECTION 12/103 NOT IN DIRECTORY                 RECORD NUMBER    18781
```

98. Missing a gamma spectrum for continuum of gammas
MAT=8031, MF=12, MT=103 (1): No gamma spectrum

```
     ERROR(S) FOUND IN MAT=8031, MF=12, MT=103
        CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

99. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=8031, MF=12, MT=104 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=8031, MF=12, MT=104
        SECTION 12/104 NOT IN DIRECTORY                 RECORD NUMBER    18791
```

100. Missing a gamma spectrum for continuum of gammas
MAT=8031, MF=12, MT=104 (1): No gamma spectrum

```
     ERROR(S) FOUND IN MAT=8031, MF=12, MT=104
        CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

101. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=8031, MF=12, MT=107 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=8031, MF=12, MT=107
        SECTION 12/107 NOT IN DIRECTORY                 RECORD NUMBER    18799
```

102. Missing a gamma spectrum for continuum of gammas
MAT=8031, MF=12, MT=107 (1): No gamma spectrum

```
     ERROR(S) FOUND IN MAT=8031, MF=12, MT=107
        CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

103. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=8031, MF=14, MT= 16 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=8031, MF=14, MT= 16
        SECTION 14/ 16 NOT IN DIRECTORY                 RECORD NUMBER    18814
```

104. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=8031, MF=14, MT= 17 (0): Directory (b)

13

```
      ERROR(S) FOUND IN MAT=8031, MF=14, MT= 17
         SECTION 14/ 17 NOT IN DIRECTORY                 RECORD NUMBER    18816
```

105. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 22 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF=14, MT= 22
         SECTION 14/ 22 NOT IN DIRECTORY                 RECORD NUMBER    18818
```

106. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 28 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF=14, MT= 28
         SECTION 14/ 28 NOT IN DIRECTORY                 RECORD NUMBER    18820
```

107. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 51 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF=14, MT= 51
         SECTION 14/ 51 NOT IN DIRECTORY                 RECORD NUMBER    18822
```

108. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 52 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF=14, MT= 52
         SECTION 14/ 52 NOT IN DIRECTORY                 RECORD NUMBER    18824
```

109. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 53 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF=14, MT= 53
         SECTION 14/ 53 NOT IN DIRECTORY                 RECORD NUMBER    18826
```

110. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 54 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF=14, MT= 54
         SECTION 14/ 54 NOT IN DIRECTORY                 RECORD NUMBER    18828
```

111. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 55 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=8031, MF=14, MT= 55
         SECTION 14/ 55 NOT IN DIRECTORY                 RECORD NUMBER    18830
```

112. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 56 (0): Directory (b)

14

```
        ERROR(S) FOUND IN MAT=8031, MF=14, MT= 56
           SECTION 14/ 56 NOT IN DIRECTORY                RECORD NUMBER   18832
```

113. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 57 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF=14, MT= 57
           SECTION 14/ 57 NOT IN DIRECTORY                RECORD NUMBER   18834
```

114. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 58 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF=14, MT= 58
           SECTION 14/ 58 NOT IN DIRECTORY                RECORD NUMBER   18836
```

115. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 59 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF=14, MT= 59
           SECTION 14/ 59 NOT IN DIRECTORY                RECORD NUMBER   18838
```

116. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 60 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF=14, MT= 60
           SECTION 14/ 60 NOT IN DIRECTORY                RECORD NUMBER   18840
```

117. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 61 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF=14, MT= 61
           SECTION 14/ 61 NOT IN DIRECTORY                RECORD NUMBER   18842
```

118. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 62 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF=14, MT= 62
           SECTION 14/ 62 NOT IN DIRECTORY                RECORD NUMBER   18844
```

119. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 63 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF=14, MT= 63
           SECTION 14/ 63 NOT IN DIRECTORY                RECORD NUMBER   18846
```

120. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 64 (0): Directory (b)

```
         ERROR(S) FOUND IN MAT=8031, MF=14, MT= 64
            SECTION 14/ 64 NOT IN DIRECTORY                  RECORD NUMBER   18848
```

121. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 65 (0): Directory (b)

```
         ERROR(S) FOUND IN MAT=8031, MF=14, MT= 65
            SECTION 14/ 65 NOT IN DIRECTORY                  RECORD NUMBER   18850
```

122. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 66 (0): Directory (b)

```
         ERROR(S) FOUND IN MAT=8031, MF=14, MT= 66
            SECTION 14/ 66 NOT IN DIRECTORY                  RECORD NUMBER   18852
```

123. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 67 (0): Directory (b)

```
         ERROR(S) FOUND IN MAT=8031, MF=14, MT= 67
            SECTION 14/ 67 NOT IN DIRECTORY                  RECORD NUMBER   18854
```

124. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 68 (0): Directory (b)

```
         ERROR(S) FOUND IN MAT=8031, MF=14, MT= 68
            SECTION 14/ 68 NOT IN DIRECTORY                  RECORD NUMBER   18856
```

125. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 69 (0): Directory (b)

```
         ERROR(S) FOUND IN MAT=8031, MF=14, MT= 69
            SECTION 14/ 69 NOT IN DIRECTORY                  RECORD NUMBER   18858
```

126. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT= 91 (0): Directory (b)

```
         ERROR(S) FOUND IN MAT=8031, MF=14, MT= 91
            SECTION 14/ 91 NOT IN DIRECTORY                  RECORD NUMBER   18860
```

127. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT=102 (0): Directory (b)

```
         ERROR(S) FOUND IN MAT=8031, MF=14, MT=102
            SECTION 14/102 NOT IN DIRECTORY                  RECORD NUMBER   18862
```

128. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT=103 (0): Directory (b)

16

```
        ERROR(S) FOUND IN MAT=8031, MF=14, MT=103
            SECTION 14/103 NOT IN DIRECTORY                 RECORD NUMBER   18864
```

129. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT=104 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF=14, MT=104
            SECTION 14/104 NOT IN DIRECTORY                 RECORD NUMBER   18866
```

130. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=14, MT=107 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF=14, MT=107
            SECTION 14/107 NOT IN DIRECTORY                 RECORD NUMBER   18868
```

131. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=15, MT= 16 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF=15, MT= 16
            SECTION 15/ 16 NOT IN DIRECTORY                 RECORD NUMBER   18871
```

132. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=15, MT= 17 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF=15, MT= 17
            SECTION 15/ 17 NOT IN DIRECTORY                 RECORD NUMBER   18922
```

133. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=15, MT= 22 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF=15, MT= 22
            SECTION 15/ 22 NOT IN DIRECTORY                 RECORD NUMBER   18949
```

134. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=15, MT= 28 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF=15, MT= 28
            SECTION 15/ 28 NOT IN DIRECTORY                 RECORD NUMBER   19015
```

135. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=15, MT= 91 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF=15, MT= 91
            SECTION 15/ 91 NOT IN DIRECTORY                 RECORD NUMBER   19082
```

136. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=15, MT=102 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF=15, MT=102
            SECTION 15/102 NOT IN DIRECTORY                 RECORD NUMBER   19204
```

137. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=15, MT=103 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF=15, MT=103
            SECTION 15/103 NOT IN DIRECTORY                 RECORD NUMBER   19450
```

138. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=15, MT=104 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF=15, MT=104
            SECTION 15/104 NOT IN DIRECTORY                 RECORD NUMBER   19554
```

139. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=8031, MF=15, MT=107 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=8031, MF=15, MT=107
            SECTION 15/107 NOT IN DIRECTORY                 RECORD NUMBER   19622
```

- `groupie` Errors:

    1. Very small elastic cross section found
       0: Small elastic

       ```
       Multi-Group and Multi-Band Parameters from ENDF/B Data (GROUPIE 2015-2)
       -----------------------------------------------------------------------
       ENDF/B Input and Output Data Filenames
       ENDFB.IN
       ENDFB.OUT
       ... [97 more lines]
       ```

- `fudge-4.0` Warnings:

    1. Missing a channel with a particular angular momenta combination
       resonances / resolved / MultiLevel_BreitWigner (Error # 0): missingResonanceChannel

       ```
       WARNING: Missing a channel with angular momenta combination L = 0, J = 1.5 and S = 1.5 for "capture"
       ```

    2. Potential scattering hasn't converted, you need more L's!
       resonances / resolved (Error # 1): potentialScatteringNotConverged

       ```
       WARNING: Potential scattering hasn't converged by L=0 at E=459.14 eV, xs[0]/xs[0]=100.0% > 0.1%
       ```

    3. Cross section does not match sum of linked reaction cross sections
       crossSectionSum label 0: total (Error # 0): CS Sum.

       ```
       WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.63%
       ```

    4. Cross section does not match sum of linked reaction cross sections
       crossSectionSum label 1: (z,n) (Error # 0): CS Sum.

```
WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.83%
```

- `fudge-4.0` Errors:

  1. Found a negative probability
     reaction label 19: n + Hg198_e19 / Product: n / Distribution: / angularTwoBody -
     XYs2d: (Error # 0): Negative prob.

     ```
     WARNING: Negative probabilities encountered. Incident energy: 2.e6 eV, worst case: -0.00289999700667
     ```

  2. Calculated and tabulated Q values disagree.
     reaction label 21: n[multiplicity:'2'] + Hg197 + gamma (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -8456088.279754639 eV vs -8300690. eV!
     ```

  3. Calculated and tabulated Q values disagree.
     reaction label 22: n[multiplicity:'3'] + Hg196 + gamma (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -15596785.04931641 eV vs -1.52814e7 eV!
     ```

  4. Calculated and tabulated Q values disagree.
     reaction label 23: n + H1 + Au197 + gamma (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -7670473.285736084 eV vs -7103220. eV!
     ```

  5. Calculated and tabulated Q values disagree.
     reaction label 24: Hg199 + gamma (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: 6532881.07522583 eV vs 6.649e6 eV!
     ```

  6. Calculated and tabulated Q values disagree.
     reaction label 25: n + He4 + Pt194 + gamma (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: 922977.3276062012 eV vs 1333060. eV!
     ```

  7. Calculated and tabulated Q values disagree.
     reaction label 26: H1 + (Au198_s ->Au198 + gamma) (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -529776.5161743164 eV vs -590530. eV!
     ```

  8. Calculated and tabulated Q values disagree.
     reaction label 27: H2 + (Au197_s ->Au197 + gamma) (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -5453098.979125977 eV vs -4878610. eV!
     ```

  9. Calculated and tabulated Q values disagree.
     reaction label 28: He4 + (Pt195_s ->Pt195 + gamma) (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: 7124108.732757568 eV vs 7457750. eV!
     ```

- `njoy2012` Warnings:

  1. Evaluation has no unresolved resonance parameters given
     unresr...calculation of unresolved resonance cross sections (0): No URR

```
      ---message from unresr---mat 8031 has no unresolved parameters
                      copy as is to nout
```

2. Evaluation has no unresolved resonance parameters given
   purr...probabalistic unresolved calculation (0): No URR

```
      ---message from purr---mat 8031 has no unresolved parameters
                      copy as is to nout
```

3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)

```
      ---message from conver---cannot do complete particle production for mt= 16
                      only mf4/mf5 provided
```

4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)

```
      ---message from conver---cannot do complete particle production for mt= 17
                      only mf4/mf5 provided
```

5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)

```
      ---message from conver---cannot do complete particle production for mt= 22
                      only mf4/mf5 provided
```

6. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (3): GROUPR/conver (0)

```
      ---message from conver---cannot do complete particle production for mt= 28
                      only mf4/mf5 provided
```

7. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (4): GROUPR/conver (0)

```
      ---message from conver---cannot do complete particle production for mt= 91
                      only mf4/mf5 provided
```

8. There is bad Kalbach parameter (r(E) or otherwise)
   check...ace consistency check (0): ACER/check energy distributions (0)

```
check energy distributions
   consis: ep.gt.epmax 9.898870E-12 with q.lt.0 for (n,x) at e  1.000000E-11 -> 1.000000E-11
```

9. There is bad Kalbach parameter (r(E) or otherwise)
   check...ace consistency check (1): ACER/check energy distributions (0)

```
check energy distributions
   consis: awr.ge.180---there could be a legitimate positive-q channel or admixed fission.
```

10. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (2): ACER/check energy distributions (0)

```
check energy distributions
   consis: ep.gt.epmax 4.949435E+01 with q.lt.0 for (n,x) at e  5.000000E+01 -> 4.949780E+01
```

11. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (3): ACER/check energy distributions (0)

```
check energy distributions
   consis: awr.ge.180---there could be a legitimate positive-q channel or admixed fission.
```

12. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (4): ACER/check energy distributions (0)

```
check energy distributions
   consis: ep.gt.epmax 5.444378E+01 with q.lt.0 for (n,x) at e  5.500000E+01 -> 5.447246E+01
```

13. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (5): ACER/check energy distributions (0)

```
check energy distributions
   consis: awr.ge.180---there could be a legitimate positive-q channel or admixed fission.
```

14. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (6): ACER/check energy distributions (0)

```
check energy distributions
   consis: ep.gt.epmax 5.939322E+01 with q.lt.0 for (n,x) at e  6.000000E+01 -> 5.944711E+01
```

15. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (7): ACER/check energy distributions (0)

```
check energy distributions
   consis: awr.ge.180---there could be a legitimate positive-q channel or admixed fission.
```

16. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (8): ACER/check energy distributions (0)

```
check energy distributions
   consis: ep.gt.epmax 6.434265E+01 with q.lt.0 for (n,x) at e  6.500000E+01 -> 6.442176E+01
```

17. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (9): ACER/check energy distributions (0)

```
check energy distributions
   consis: awr.ge.180---there could be a legitimate positive-q channel or admixed fission.
```

18. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (10): ACER/check energy distributions (0)

```
check energy distributions
   consis: ep.gt.epmax 9.898870E+01 with q.lt.0 for (n,x) at e  1.000000E+02 -> 9.899561E+01
```

19. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (11): ACER/check energy distributions (0)

```
check energy distributions
   consis: awr.ge.180---there could be a legitimate positive-q channel or admixed fission.
```

20. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (12): ACER/check energy distributions (0)

```
check energy distributions
   consis: ep.gt.epmax 1.088875E+02 with q.lt.0 for (n,x) at e  1.100000E+02 -> 1.089449E+02
```

21. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (13): ACER/check energy distributions (0)

```
check energy distributions
   consis: awr.ge.180---there could be a legitimate positive-q channel or admixed fission.
```

22. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (14): ACER/check energy distributions (0)

```
check energy distributions
   consis: ep.gt.epmax 1.187864E+02 with q.lt.0 for (n,x) at e  1.200000E+02 -> 1.188942E+02
```

23. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (15): ACER/check energy distributions (0)

```
check energy distributions
   consis: awr.ge.180---there could be a legitimate positive-q channel or admixed fission.
```

24. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (16): ACER/check energy distributions (0)

```
check energy distributions
   consis: ep.gt.epmax 1.286852E+02 with q.lt.0 for (n,x) at e  1.300000E+02 -> 1.288435E+02
```

25. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (17): ACER/check energy distributions (0)

```
check energy distributions
   consis: awr.ge.180---there could be a legitimate positive-q channel or admixed fission.
```

26. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (18): ACER/check energy distributions (0)

```
        check energy distributions
          consis: ep.gt.epmax 1.385841E+02 with q.lt.0 for (n,x) at e  1.400000E+02 -> 1.387928E+02
```

27. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (19): ACER/check energy distributions (0)

```
        check energy distributions
          consis: awr.ge.180---there could be a legitimate positive-q channel or admixed fission.
```

28. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (20): ACER/check energy distributions (0)

```
        check energy distributions
          consis: ep.gt.epmax 1.484830E+02 with q.lt.0 for (n,x) at e  1.500000E+02 -> 1.487421E+02
```

29. There is bad Kalbach parameter (r(E) or otherwise)
    check...ace consistency check (21): ACER/check energy distributions (0)

```
        check energy distributions
          consis: awr.ge.180---there could be a legitimate positive-q channel or admixed fission.
```

- `njoy2012` Errors:

  1. An angular distribution is negative
     acer...monte carlo neutron and photon data (0): Neg. P(Ejμ) (b)

     ```
     ---message from ptleg2---negative probs found
                            14 for mt= 69 e= 2.000E+06
     ```

- `acelst` Warnings:

  1. The incident energy grid is not monotonic for this angular distribution
     0: Bad Ang. Dist.

     ```
     ACELST WARNING - Processing Ang.Dist.MT        2
                      E-grid non-monotonic   2.000000000E+01 2.000000000E+01
     ```